REMARKS

Claims 21-29, 43-51, 53, and 54 are pending in the present application. Reconsideration of the claims is respectfully requested.

I. 35 U.S.C. § 103, Obviousness

The Office Action rejects claims 21-27, 43-49, and 53 under 35 U.S.C. § 103 as being unpatentable over *Matsui et al.* (U.S. Patent No. 5,956,028 A) in view of *Dawson* (U.S. Patent No. 5,727,155 A). This rejection is respectfully traversed.

Matsui teaches a virtual space communication system with three-dimensional image display. A plurality of client computers manipulated by individual users, a data management computer, and a host computer are connected through a network. The data management computer manages a virtual reality markup language (VRML) file expressing a virtual space. Each client computer displays the virtual space according to the VRML file. Participants may then manipulate objects in the virtual space. See *Matsui*, Abstract.

In a conventional VRML environment, participants are able to change the viewpoint or, in other words, "walk through" the virtual space. However, if the virtual space is divided into sections, which are stored on a server, the data must be read out of a 3D database and provided to a 3D drawing unit whenever the view point moves from one section of virtual space to another section of virtual space. Thus, moving the viewpoint from one space to another results in a long waiting period. See *Matsui*, col. 3, line 23, to col. 4, line 17. The invention of *Matsui* attempts to shorten the waiting time when the viewpoint enters a certain space for the first time.

Matsui teaches separating the management of the objects within a virtual space from the management of property data of the objects. *Matsui* states:

> From the standpoint of managing the property data of the objects frequently changed by manipulation input at each client computer, separately from management of data expressing the virtual space which is not switched frequently, in this virtual space communication system, update of property data of objects corresponding to the manipulating input of the client computers is provided to the second management computer through the network, and the second management computer notifies the updating

> property data and the updated property data to the other client computer sharing the virtual space.

Matsui, col. 4, line 64, to col. 5, line 6. Therefore, client computers may manipulate objects in the virtual space. *Matsui* teaches a first management computer manages the manipulation of objects that are frequently changed, separately from the management of data expressing the virtual space that is not switched frequently. As acknowledged in the Office Action, *Matsui* does not teach or suggest shared data including access control information indicating an access control level for a given participant.

In fact, *Matsui* fails to teach shared data including access control information for good reason. In *Matsui*, the entire shared virtual space is encoded in a VRML file and the objects in this space are shared among all participants. No need exists in *Matsui* for including access control information, because all participants are intended to receive, view, and manipulate all information in the VRML file. *Matsui* simply does not contemplate controlling access to objects virtual space.

The Final Office Action states that *Dawson* teaches shared data including access control information indicating an access control level for a given participant and displaying information based on the access control level in the Abstract and at col. 2, lines 38-43. *Dawson* does indeed teach dynamically controlling a remote system's access to a selected application of a host computer system and performing modifications to applications at the host system. See *Dawson*, Abstract. However, controlling access to applications at a host computer, as in *Dawson*, and controlling access to information displayed in a rendered three-dimensional environment are quite different and are not functionally equivalent. Therefore, *Dawson* simply does not teach or fairly suggest displaying a virtual representation of shared **data** in a rendered **three-dimensional environment** based on an access control level.

Furthermore, in *Matsui*, the entire shared virtual space is shared among all participants. *Matsui* does not present a problem for which the teachings of *Dawson* can be considered a solution. Therefore, a person of ordinary skill in the art would not be motivated to combine the feature of dynamically controlling a remote system's access to a selected application of a host computer system, as taught by *Dawson*, with the virtual space communication system of *Dawson*. The Office Action alleges that a person of

ordinary skill in the art would have been motivated to combine *Matsui* and *Dawson* because *Dawson* teaches that, with shared applications, relinquishing complete control may be detrimental because it allows a participant to have access to information and to make modifications to applications that the host or server might not want. However, the problems associated with shared applications at a host computer system simply do not apply to objects within a shared virtual space. For this reason, *Dawson* is non-analogous art and a person of ordinary skill in the art would not look to the teachings of *Dawson* to solve the problems of *Matsui*, especially considering there are no such problems recognized in *Matsui*.

While *Matsui* does teach that each client may manipulate property data, there is no suggestion in *Matsui* that a right to do so should be controlled. To the contrary, as pointed out in the Office Action, *Matsui* teaches that each client shall have this capability, not just a subset of the clients. The Office Action states that *Matsui* need not present a problem for a proposed motivation to apply; however, some suggestion must exist in the prior art for the combination to be obvious. Again, *Matsui* teaches a VRML space that is shared by all clients without constraint and *Dawson* teaches controlling access to **applications** at a host computer. The Office Action fails to show how the prior art teachings would lead a person of ordinary skill in the art to combine *Matsui* and *Dawson*. Therefore, the Office Action fails to establish a *prima facie* case of obviousness.

Still further, even assuming one would combine *Matsui* and *Dawson*, and such a combination could be made, the proposed combination would not result in the presently claimed invention. That is, a combination of *Matsui* and *Dawson* would not result in a virtual space communications system in which access to objects in the virtual space is controlled for a given participant. Rather, a combination of *Matsui* and *Dawson* would result in a virtual space communications system in which access to the applications at the host computer system is controlled.

The Office Action states that the combination does not need to result in a virtual space communication system in which access to objects in the virtual space is controlled for a given participant, because the feature is not claimed. Applicants respectfully disagree. Claim 21, for example, recites:

21. A method in a data processing system, comprising:

rendering a three-dimensional environment on a client computer associated with a first participant to form a rendered three-dimensional environment;

receiving shared data from a client computer associated with a second participant, wherein the shared data includes information to be shared between the second participant and the first participant and access control information indicating an access control level for the first participant; and

displaying a virtual representation of the shared data in the rendered three-dimensional environment on the client computer associated with the first participant based on the access control level of the first participant.

The applied references, taken alone or in combination, fail to teach or suggest, for example, receiving shared data from a client computer that includes access control information indicating an access control level for a given participant, as recited in claim 21. Since the applied references, taken individually or in combination, fail to teach or fairly suggest each and every claim limitation and the proposed combination would not result in the presently claimed invention, *Matsui* and *Dawson* do not render claim 21 obvious. Independent claims 43 and 53 recite subject matter addressed above with respect to claim 21 and are allowable for similar reasons. Since claims 21-27 and 44-49 depend from claims 21 and 43, the same distinctions between *Matsui* and *Dawson* and the invention recited in claims 21, and 43 apply for these claims. Additionally, claims 22-27 and 44-49 recite other additional combinations of features not suggested by the reference.

Therefore, Appellants respectfully request withdrawal of the rejection of claims 21-27, 43-49, and 53 under 35 U.S.C. § 103.

The Office Action rejects claims 28, 50, and 54 under 35 U.S.C. § 103 as being unpatentable over *Benman, Jr.* (U.S. Patent No. 5,966,130 A) in view of *Kirk et al.* (U.S. Patent No. 6,175,842 B1). This rejection is respectfully traversed.

Benman teaches an integrated virtual network that provides a virtual three-dimensional representation of an office. An interface receives user input and adjusts the display to provide an image that appears to allow the user to virtually move within the

office and access tools and assets. Figure 2 of *Benman* illustrates an implementation of a virtual workstation.

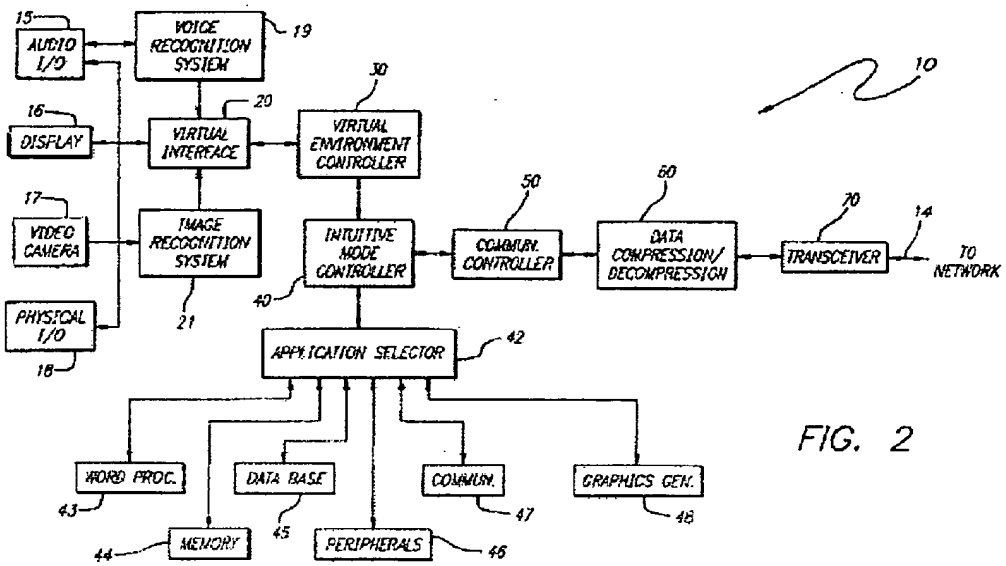


FIG. 2

Benman states the following:

> While the virtual environment controller 30 stores and updates the virtual environment for display (step 120), a mode controller (computer) 40 receives and processes the virtual inputs and intuits the application tool to be selected based on the stored attributes of the tool and assets being accessed within the environment (steps 120 and 122). Thus, for example, as the user moves through the virtual office and pulls a file out of a drawer using a hand, an avatar or voice command, the intuitive mode controller 40 automatically selects a database tool 45 via an application selector 42. The database 45 displays a list of the contents of the virtual file cabinets on the display 16 as virtual files. When a document is selected, the user may place it on the desk. Simultaneously, the mode controller 40 intuitively selects a word processing program and brings up a file corresponding to the graphical representation of the file in response to virtual and/or real keyboard inputs as well as other inputs (e.g., voice). This is depicted at step 128. In this process, other tools including memory 44 and peripherals (such as offline storage devices) are used in a conventional manner.

Benman, col. 5, lines 14-33. Thus, *Benman* teaches that a document may be presented from local database storage in the virtual environment. *Benman* also states:

> Thus, one user may virtually walk into the office of another worker and have a face-to-face meeting while viewing and editing a common document.

Benman, col. 3, lines 5-8. However, *Benman* does not address what happens if a document is not common to two workers. *Benman* does not teach or suggest transferring a file from a first client of a first participant to a second client of a second participant.

More particularly, as acknowledged in the Office Action, *Benman* does not teach or suggest receiving a selection of an avatar of a second participant, receiving a selection of a file to be transferred from the client computer associated with the first participant transferring the file to a client computer associated with the second participant, as recited in claim 28. The Office Action alleges that *Kirk* teaches an avatar representing a second participant and receiving selection of the avatar from the first participant at col. 3, lines 10-22, and col. 8, lines 13-22 and 34-37. The cited portions of *Kirk* are as follows:

> The multi-user software allows each user to select an avatar to represent the user in the displayed VR environment. An avatar is a virtual representation of a user in a VR environment. It usually appears as a figurine or just the head of a figure. The user is able to move and interact in the VR by providing input to the user's avatar using client input devices. Avatar locations are tracked by the multi-user server, and avatar update information is periodically broadcast to all of the clients. The multi-user software on the clients then update the positions of the avatars displayed to their respective users. The multi-user software further allows users to interact socially with each other by allowing communications between users.

Kirk, col. 3, lines 10-22.

> When a 3-D VR environment is displayed, each user appears as an avatar to other users in the environment. This functionality is supported by using a multi-user server 411 as is known in the art to generate, track, and exchange avatar and communications data between users occupying the same VR environment. In accordance with the present invention, user 410 selects an avatar by communicating through client A 401 with multi-user server 411 connected to the network 404. In one embodiment, the user selects an

> avatar from a set of predetermined avatars. In another embodiment, an avatar is randomly assigned to the user. In yet another embodiment, the user can build her own avatar using an avatar editing tool that enables the user to specify avatar characteristics such as torso length, body type, head shape, and facial characteristics.
>
> As the user 410 provides inputs to client A 401 to control the movements of the avatar in a VR environment, the inputs are provided to the multi-user server 411. Multi-user server also receives inputs from client B 402 (receiving inputs from user 412) and client C 403 (receiving inputs from user 413). The multi-user server 411 tracks the movements of the avatars and sends avatar data to each of the clients such that each of the users can see other users'avatars when those avatars are visible in the VR environment.

Kirk, col. 8, lines 13-36. Thus, *Kirk* teaches that a user may select her own avatar and users can see the avatars of other users in the virtual reality environment. However, *Kirk* does not mention selecting an avatar of another user. *Kirk* teaches that users may communicate using voice or text chat, but does not teach or fairly suggest receiving a selection of an avatar of a second participant from a first participant, receiving a selection of a file to be transferred from the client computer associated with the first participant transferring the file to a client computer associated with the second participant, as recited in claim 28, for example.

Since the applied references, taken individually or in combination, fail to teach or fairly suggest each and every claim limitation, the proposed combination would not result in the presently claimed invention. Therefore, *Benman* and *Kirk* do not render claim 28 obvious. Independent claims 50 and 54 recite subject matter addressed above with respect to claim 28 and are allowable for similar reasons.

Therefore, Applicants respectfully request withdrawal of the rejection of claims 28, 50, and 54 under 35 U.S.C. § 103.

The Office Action rejects claims 29 and 51 under 35 U.S.C. § 103 as being unpatentable over *Benman, Jr.* (U.S. Patent No. 5,966,130 A) and *Kirk et al.* (U.S. Patent No. 6,175,842 B1) and further in view of *Dawson* (U.S. Patent No. 5,727,155 A). This rejection is respectfully traversed.

As stated above with respect to claims 28 and 50, *Benman* and *Kirk*, taken alone or in combination, do not teach or fairly suggest selecting an avatar of a second participant within a graphical user interface for transfer of a file, selecting a file to be transferred in the graphical user interface, and transferring the file to a client computer associated with the second participant. *Dawson* also fails to teach or suggest these features; therefore, *Dawson* does not cure the deficiencies of *Benman* and *Kirk*. As a result, claims 29 and 51 are allowable at least by virtue of their dependency on claims 28 and 50, respectively.

Further, with respect to claims 29 and 51, the Office Action acknowledges that *Matsui* and *Kirk* do not teach or suggest sending a transfer request to the second participant and receiving acceptance from the second participant, wherein the step of transferring the file to the client computer associated with the second participant is performed in response to receiving the acceptance. However, the Office Action alleges that *Dawson* teaches sending a transfer request to the second participant at col. 2, lines 5-10, of the BACKGROUND section. The cited portion of *Dawson* states:

> Another type of remote access system in the prior art allows the owner of the system to share access with the remote user. In this type of system, only one of the owner or the remote user will have access to the system at any one particular time, not both. One disadvantage to such a system is that in order for access to be changed to a different user, the user without access must request it from the user with access. The user with access must then decide whether to relinquish access to the requesting user. Such a request is made every time a user without access desires access. Thus, in situations where significant interaction is occurring between two users, this type of system requires a substantial amount of ongoing user involvement, which is frequently distracting and annoying to both users. Furthermore, once the owner of the system relinquishes control to a remote user, there is nothing requiring the remote user to give control back to the owner when requested.

Dawson, col. 2, lines 1-16. This cited portion specifically teaches that a user may share remote access to an application at a host computer system, but the user must request access in order for access to be shared. The Office Action also alleges that *Dawson*

teaches receiving an acceptance from the second participant and transferring the file to a client computer associated with the second participant in response to receiving the acceptance in much later column 11, lines 40-44, of the DETAILED DESCRIPTION section. The cited portion of *Dawson* states:

> If the remote system is accorded unlocked access, then the sensor application in the host system sends a signal to the remote system indicating that inputs by the remote user which modify a shared application should be transmitted to the host system, step 540. This signal causes the remote system to transfer all mouse and keyboard inputs by the remote system user which affect a shared application to the host system. In one embodiment, this determination of which inputs are transferred to the host system is performed by remote application 360 of FIG. 3.

Dawson, col. 11, lines 40-49. This cited portion has nothing to do with the previously cited portion; therefore, the user in this portion would not be the same "second participant" as the user in the previous portion.

Furthermore, none of the cited portions of *Dawson*, or any un-cited portions, teaches or suggests transferring a file to a second participant, wherein an avatar representing the second participant and a file to be transferred are selected in a graphical user interface presenting a three-dimensional environment, in response to receiving the acceptance, as recited in claims 29 and 51. The Office Action proffers no analysis as to why sharing access to an application at a host computer system and modifying a shared application are somehow equivalent to transferring a file from a client computer associated with a first participant in a three-dimensional environment to a client computer associated with a second participant in the three-dimensional environment, wherein the second participant and the file to be transferred are selected in a graphical user interface that displays the three-dimensional environment.

The applied references, taken alone or in combination, fail to teach or suggest each and every claim limitation. For the above reasons, the applied references cannot be combined to form the presently claimed invention and, thus, the proposed combination of *Benman*, *Kirk*, and *Dawson* do not render claims 29 and 51 obvious.

Therefore, Appellants respectfully request that the rejection of claims 29 and 51 under 35 U.S.C. § 103 not be sustained.

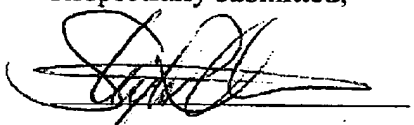
II. Conclusion

It is respectfully urged that the subject application is patentable over the prior art of record and is now in condition for allowance.

The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

DATE: February 15, 2005

Respectfully submitted,



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